

Notice of Allowability

Application No.

10/782,351

Examiner

Nurul M. Matin

Applicant(s)

CHIODINI ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/03/2008.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 9/24/2007
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Imam, Maryam on January 7th, 2008.

Claim 1 should now read:

a modem system for receiving and transmitting signals comprising: a frequency domain equalizer (FEQ) block being responsive to a frequency channel response for processing the frequency channel response to generate one or more initial FEQ coefficients (FEQ 1), said modem system being responsive to an input signal for processing the input signal to generate said frequency channel response, said input signal being generated from a transmitted signal, said FEQ block using said FEQ 1 to generate an equalized Signal, said modem system demodulating said equalized Signal to generate a demodulated Signal symbol; and a transmitter responsive to said demodulated Signal symbol for processing the demodulated Signal symbol to generate a remodulated Signal symbol, said modem system for using said remodulated Signal symbol to generate one or more FEQ coefficients (FEQ2), said FEQ coefficients for enhancing the accuracy of said FEQ block in equalizing said frequency channel response, wherein said FEQ coefficients improve the performance of said modem

system by mitigating the effects of multi-path channel arising in transmission of said transmitted signal.

2. The amendment filed on August 28th, 2007 overcomes the following objection/rejection of the last Office Action:

a. Objection to the abstract for using "said", and also for exceeding more than 150 words.

b. Objection to the disclosure for missing continuation-in-part of the U.S. Patent Application number.

Allowable Subject Matter

3. Claims 1-20 are allowable.

The following is an examiner's statement of reasons for allowance:

Referring to claims 1, 18-20, Benson, Jr. references (US 6507827) discloses an adaptive modem to improve communication system performance that uses multiple modulation schemes comprising modulation technique. Sandberg reference (US 20020057734) also discloses a system and method that provide frequency domain supplemental training of the time domain equalizer for DMT. Neither Benson and Sandberg references taken alone or in combination, does not disclose, teach or fairly suggest a modem system for receiving and transmitting signals comprising: a frequency domain equalizer (FEQ) block being responsive to a frequency channel response for

processing the same to generate one or more initial FEQ coefficients (FEQ 1), said modem system being responsive to an input signal for processing the same to generate said frequency channel response, said input signal being generated from a transmitted signal, said FEQ block using said FEQ 1 to generate an equalized Signal, said modem system demodulating said equalized Signal to generate a demodulated Signal symbol; and a transmitter responsive to said demodulated Signal symbol for processing the same to generate a remodulated Signal symbol, said modem system for using said remodulated Signal symbol to generate one or more FEQ coefficients (FEQ2), said FEQ coefficients for enhancing the accuracy of said FEQ block in equalizing said frequency channel response, wherein said FEQ coefficients improve the performance of said modem system by mitigating the effects of multi-path channel arising in transmission of said transmitted signal. The aspect of claims 1, 18-20 are the above neither anticipated nor obviated by the prior art of record.

Claims 2-17 are depend on claim 1

Therefore, claims 2-17 are allowable for the same reason as for claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

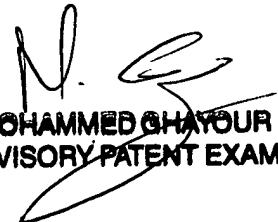
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nurul M. Matin whose telephone number is 571-270-1188. The examiner can normally be reached on mon-fri (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nurul Matin
Examiner.


MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER